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## Peirce on the Continuity between Human and Nonhuman Minds

### The Nonhuman Turn: Precursors and Contemporary Protagonists

To dissuade us from our long-cherished conviction that humans are the crown of all creation has become the purpose of scholars in philosophy and cultural studies who call for a “nonhuman turn.” Under this programmatic name, Richard Grusin and the Center for 21st Century Studies announced a new paradigm in the humanities on the occasion of a conference at the University of Wisconsin-Milwaukee in 2015. In his introduction to a collection of papers from this meeting, Grusin explains that the project aims at decentering human beings from their allegedly privileged place in the cosmic design. The twenty-first century’s nonhuman turn, as Grusin sees it, “covers a wide variety of recent and current critical, theoretical, and philosophical approaches to the humanities and social sciences ... engaged in decentering the human in favor of a turn toward and concern for the nonhuman, understood variously in terms of animals, affectivity, bodies, organic and geophysical systems, materiality, or technologies” (vii). The cover design of the book edited by Grusin presents the fragments of an electronic circuit board and incomplete drawings of two insects. It thus reduces the plurality of trends under the nonhuman heading to two rather divergent ones, animal studies and the study of digital technologies. The visual argument seems to be that animals and digital technologies are the two major challenges in the current trend of decentering humans towards the nonhuman. Who are the protagonists of this trend? The tentative answers offered in the following have to remain restricted in their focus to the domain of contemporary philosophers who have included animals in their purview, but the scope will extend to some precursors of the current turn towards nonhuman animals.

In 2002, Giorgio Agamben led the way with his reflections on the nature of the animal in *the human*, proposing a philosophy of the nonhuman under the title *The Open*, with the subtitle *Man and Animal*. With reference to Carl Linnaeus’ *Systema Naturae* of 1735, Agamben expounded how much the tradition of humanism had neglected the continuity between the biological species of humans and apes (24). For Agamben, the insistent attempts of humankind to define itself as a species separate from all other animals is the

product of an “anthropological machine” constructing the human species as separate from nonhuman ones:

*Homo sapiens*, then, is neither a clearly defined species nor a substance; it is, rather, a machine or device for producing the recognition of the human.... It is an optical machine constructed of a series of mirrors in which man, looking at himself, sees his own image always already deformed in the features of an ape. *Homo* ... must recognize himself in non-man in order to be human. (26-27)

Derrida followed next in the philosophical turn towards the nonhuman, when he addressed the relationship between human and nonhuman animals in *The Animal that Therefore I Am* of 2006 and in *The Beast and the Sovereign* 1 and 2.

Even a philosopher of the nonhuman so far renowned only for contributions to the philosophy of technology, Gilbert Simondon, became known for philosophical reflections on animals. His *Two Lessons on Animal and Man*, originally a manuscript of lectures delivered in the 1960s, were published posthumously in 2004 and became translated to English in 2011. That Simondon’s ideas on animals could attract attention in the wake of the nonhuman turn is somewhat surprising, for the French philosopher sought inspiration in the rather anthropocentric doctrine of animal instincts of the Stoics, a doctrine quite retrograde from the perspective of modern behavioral biology. As Simondon presents it, instinct in animals is “essentially comprised of automatism” and “what the animal does that resembles man, it does by instinct. Whatever this may be, man does it by reason” (55).

Despite these outdated anthropocentric premises, Simondon’s *Two Lessons* are still readable because they offer a broad historical panorama of ideas on animals, ranging from the Presocratics to the classics of French philosophy. They also present remarkable insights on the mechanical side of the nonhuman. The antipodes in Simondon’s panorama are Montaigne and Descartes. The author characterizes the former as a monist and the latter as a dualist. Montaigne “is fundamentally a monist, which is to say, all psychical faculties existing in animals are the same as those existing in man. For Montaigne, animals judge, compare, reason, and act the same as man; the same and even better” (70). These ideas certainly position Montaigne as a philosophical precursor to the philosophical turn towards nonhuman animals.

Simondon’s summary of Descartes’ dualist position is that Cartesian animals are creatures without intelligence, instinct, and, of course, without a soul. Animals are restricted to the physical sphere of *res extensa*, where they act as machines or automata, whereas humans, endowed with a soul,

consist both of *res extensa* and of *res cogitans*. Only they are thinking beings. To attribute reason to animals is an offense second only to blasphemy, “for after the error of those who deny the existence of God ..., there is none that is more powerful in leading feeble minds astray from the straight path of virtue than the supposition that the soul of the brutes is of the same nature with our own” (*Discourse on M.*, pt. 5).

Simondon’s panorama of the philosophical ancestors of nonhuman studies does not include the radical ideas entertained by Julien Offray de *La Mettrie*, which also deserve mention in the context since *La Mettrie* inverts Montaigne’s humanistic perspective on animals by attributing to both animals and humans a mechanical nature. In his book entitled *L’homme machine* of 1748, La Mettrie provokes his readers with the argument that not only animals but also humans are machines, with the only difference, that humans are “enlightened machines” (“machines bien éclairées”).

Evidence for the recent turn away from anthropocentrism also comes from the contemporary philosophy of consciousness, the mental state that René Descartes emphatically denied to nonhuman animals, when he declared that only a creature endowed with a soul could qualify as a conscious being. Michael Tye, a renowned philosopher of consciousness, raises the question whether animals are conscious beings. In his recent book *Tense Bees and Shell-Shocked Crabs*, he answers this question affirmatively on the premise that “a being is conscious just in case it undergoes experience, so that the problem of animal experiences is one and the same as the problem of consciousness” (xv). Tye is also an advocate of the extension of the scope of nonhuman studies from living beings to lifeless creatures. The author not only gives evidence of consciousness in biological organisms, including those of lesser biological complexity, such as fish, honeybees, crabs, caterpillars, protozoa and plants, he also refrains from denying feeling and consciousness to complex robots.

#### Brian Massumi’s Answers to the Question of What Animals Teach Us about Politics

Under the thought-provoking title, *What Animals Teach Us about Politics*, Brian Massumi’s 2014 book is a philosophical manifesto of twenty-first century nonhuman studies. If animals are agents in politics, Massumi’s title can well be read as an allusion to the “Parliament of Things” convoked by Bruno Latour in 1991 in the last chapter of *We Have Never Been Modern*, where the author formulates a plea for the rights of material objects and for a philoso-

phy of the nonhuman, acknowledging the agency and even the rights of objects. Massumi characterizes his project of rethinking the place of humans in the universe by denouncing anthropocentric thought as a symptom of human arrogance:

The hope is that ... we might move beyond our anthropomorphism *as regards ourselves*: our image of ourselves as humanly standing apart from other animals; our inveterate vanity regarding our assumed species identity, based on the specious grounds of our sole proprietorship of language, thought, and creativity. (3)

Massumi's manifesto makes a case for a change of direction towards a world in which humans and animals may truly coexist. The author formulates his answer to the question of what animals teach us about politics in the form of fourteen "propositions" (38-54), condensed into four (M1-M4) in the following:

- M1. *Reflexive consciousness, language and thought.* Animals must no longer be studied in terms of *animal behavior*, a term that smacks of behaviorism anyway. Instead, we should turn to the study of "animal thought and its distance from or proximity to those capacities over which we human animals assert a monopoly and on which we hang our inordinate pride in our species being: language and reflexive consciousness" (2).
- M2. *Reasoning and creativity.* Instinct is not a blind mechanism by which animals act quasi-automatically, as even the cofounder of modern *ethology* Niko Tinbergen claimed in his studies of the begging behavior of herring-gull chicks of the 1950s and 1960s. Massumi rejects the assumption that animals behave according to a logic of inborn necessity and postulates instead that they think according to a logic of abduction allowing for creativity in the pursuance of their goals. He revealed that Tinbergen, ironically, ignored the proximity between animal and human reasoning and went so far as to describe the animal as "a machine, albeit one of 'great complexity' ..., like a 'slot machine'" (16). Against Tinbergen's "rigid image of the animal as a mechanism dominated by an automatism," Massumi argues that "instinctual movements are animated by a tendency to surpass given forms ... [and] are moved by an impetus toward creativity. No efficient cause can be singled out as pushing this movement of experience's self-surpassing from behind" (17).
- M3. *The human-animal continuum.* Against Tinbergen's interpretation of animals as complex machines, Massumi puts forward the argument that animals evince "*a first degree of mentality* in the continuum of nature" (17) so that the polarized opposition between humans and animals needs to

be abandoned and redefined in terms of a continuum. “Replacing the human on the animal continuum ... must be done in a way that does not erase what is different about the human but respects that difference while bringing it to new expression *on* the continuum: immanent to animality” (3).

- M4. *Logic of mutual inclusion*. Massumi pleads for rethinking humans as animals and for introducing a logic of “mutual inclusion: that of the animal and the human,” with the implication that “it is animality and humanity as a whole, and in their difference, that have paradoxically entered into a zone of indiscernibility” (7).

#### How Peirce Anticipated Issues of Contemporary Nonhuman Studies

Charles Sanders Peirce (1839-1914), the founder of the philosophy of pragmatism, anticipated key concepts of the contemporary turn towards nonhuman studies in his philosophy of nature and cognition. The continuity between human thought and nonhuman nature was one of the guiding principles of his evolutionary philosophy, formulated in his doctrine of synechism (the dogma of continuity). Key notions of the current turn towards nonhuman animals, such as animal consciousness (Tye), selfhood (Colapietro; Irvine), creativity and innovation (Kaufman and Kaufman), anthropocentrism (Boddice), or animal reasoning (Gould and Gould), are recurring topics in his writings.

The following sections examine four of these issues to show how Peirce anticipated Massumi’s four “propositions” M1 to M4. Parallel with Massumi’s deliberations on reflexive consciousness (M1), the first of these sections addresses Peirce’s ideas on nonhuman consciousness. The following sections on “Animals as Rational Beings,” “The Continuity Between Human and Nonhuman Minds,” and “Humans as Animals” present parallels with Massumi’s thoughts introduced above under M2, M3, and M4, respectively.

#### Peirce on Nonhuman Consciousness

Anticipating Massumi’s premise M1 that nonhuman animals evince reflexive consciousness, too, as well as Tye’s philosophy of consciousness in nonhuman animals, Peirce defined consciousness and experience as quasi-synonyms when he used the terms “categories of experience” and “categories of consciousness” interchangeably (*Collected P.* §§ 1.377, 7.524). He distinguished

three modes of consciousness, the first associated with feeling (Firstness), the second with otherness, resistance, action and reaction (Secondness), and the third with signs, mediation, and reason (Thirdness). Peirce claimed that all of these modalities of conscience could be found, to different degrees, both in human and in nonhuman animals. As to the first, consciousness of feeling, Peirce argued that it is even more vivid in animals than it is in humans:

Consciousness ... is rather an ambiguous term. There is that emotion which accompanies the reflection that we have animal life. A consciousness which is dimmed when animal life is at its ebb, in age or sleep, but which is ... more lively the better *animal* a man is, but is not so the better man he is. You can all distinguish this sensation I am sure; we attribute it to all animals ... because we have reason to believe that it depends upon the possession of an animal body. (*Collected P.* § 7.585)

What the consciousness of feeling means in human and nonhuman animals is the topic of the fragmentary manuscript, "The Ground-Plan of Reason," of 1910 in which Peirce elaborates on the following:

Beasts and birds, tortoises and toads, and even some fishes ... must feel, it would seem, if they are living things in a sense resembling in the least degree what anybody means when he says that he is alive, that is, if he has any inside life,—anything in which nobody else and nothing partakes with him. This seems to be precisely what we mean by *Feeling*: it is that which is within some single person and which nobody else has anything to do with. (*CSP Papers*, ms 658: 2-3)

What can humans know about the consciousness of feeling in animals at all? Thomas Nagel addressed this question in his much-quoted paper "What is it like to be a bat?" of 1974, and in the context of Nonhuman Studies, Steven Shaviro has shed new light on the issue. The question is whether a human being can have knowledge about feelings and perceptions of nonhuman animals, such as a bat, at all. Since "the bat's thinking is inaccessible to us, we should not anthropomorphize the bat's experience by modeling it on our own. But we also should not claim that, just because it is nonhuman, or not like us, the bat cannot have experiences at all" (25-26).

Peirce's answer to the question of whether we can know how other living beings feel is both no and yes, but also that it makes no difference whether the other mind is a human or a nonhuman animal. Since a feeling "is something that but one mind can have" (*CSP Papers*, ms 658: G8), we need to recognize that any feeling as such must remain unintelligible. "To comprehend it or express it in a general formula is out of the question" (*Collected P.* § 5.49). Nevertheless, it is undeniable that animals do have feelings because the fact that they feel can be inferred from the signs of feeling

they give and from the commonsensical assumption that the life of animals must evince analogies to the life of humans. Animals “must feel ... in a sense resembling in the least degree what anybody means when he says that he is alive” (*CSP Papers*, ms 658: 3).

### Animals as Rational Beings: Instinct and Abductive Reasoning

With his reference to “animal thought” (M2), Massumi takes a stand against the doctrine, at the root of Western anthropocentric thought, that only humans are thinking beings. Aristotle had divulged this doctrine with his concept of the “rational animal” (ζῷον λόγον ἔχον, *NE*, 1098a3-5) by which he defined the nature of humans in contrast to nonhuman animals as nonrational beings. In his *Pensées*, Pascal had formulated the doctrine that only humans, but not animals think in his famous dictum, “Man is but a reed ..., but he is a thinking reed” (fragm. 348).

Peirce anticipated Massumi’s plea to recognize that animals are thinking beings in many refutations of the denial of reason to animals. Animals not only think and have ideas; they also reason, according to Peirce. Against the hubris of humans who believe that only they are rational beings, his polemical counterargument is the following:

In practical affairs, in matters of vital importance, it is very easy to exaggerate the importance of ratiocination. Man is so vain of his power of reason! It seems impossible for him to see himself in this respect, as he himself would see himself if he could duplicate himself and observe himself with a critical eye. Those whom we are so fond of referring to as the “lower animals” reason very little. Now I beg you to observe that those beings very rarely commit a mistake, while we—! We employ twelve good men and true to decide a question, we lay the facts before them with the greatest care, the “perfection of human reason” presides over the presentment, they hear, they go out and deliberate, they come to a unanimous opinion, and it is generally admitted that the parties to the suit might almost as well have tossed up a penny to decide! Such is man’s glory! (*Collected P.* § 1.626)

In 1898, Peirce referred to the ideas of humans as “quite as miraculous as those of the bird, the beaver, and the ant” (§ 5.480), and in an autobiographical note concerning the rationality of nonhuman animals of 1901, he wrote:

The psychological instructors of my college days used to tell me that when a dog is observed to act as if he had reasoned, he was really acting, not from reason, but from “the association of ideas.” But more advanced study taught me that that was a shocking abuse of a phrase which was invented to mark the greatest discovery



ever made in the science of mind, namely, that all the operations of the soul take place according to one general formula which applies to reasoning and instinctive action alike. . . Then in 1863 came Wundt's *Lectures of the Minds of Men and Brutes*, which so emphasized the analogy between the dog's process of thought and that of the philosopher, that I, for once, lost sight, for a time, of the distinction my old professors had made, a distinction of substantial importance, notwithstanding their vicious way of expressing it. Certainly, dogs do, occasionally, really reason. (*CSP Papers*, ms 691)

Peirce attributed the consciousness associated with reason and reasoning (his consciousness of Thirdness) and even some form of self-consciousness without exception but with due differentiation to all animals. Animals, he argued in contrast to Descartes, Tinbergen, Simondon, and "the psychological instructors of his college days" do not act by blind instinct, but are reasoning beings, even endowed with the capacity of modifying their instinctual behavior through "self-critical" thought. With reference to research findings of behavioral biologists of his time, which showed that animals are able to change seemingly inborn habits in order to adapt to environmental changes within their lifetime, he argued:

When the minds of the lower animals first began to be studied, it was the unchangeableness of animals' methods that led observers to draw a sharp line of demarcation between Instinct and Reason. But facts subsequently came to light showing that that fixity was only relative, that bees in a clime of perpetual summer, after some generation give up storing vast quantities of honey; that beavers, provided with new material, gradually evolve new styles of architecture; that sheep, carried to valleys where poisonous hellebore grows, learn not to eat it; that birds sometimes take to unaccustomed food, and come to prefer it.... Such phenomena evince an element of self-criticism and therefore of reasoning. (*CSP Papers*, ms 831: 12-13)

When Massumi interprets "animal behavior" as creative (M2), his argument finds support in such examples, and when he attributes the capacity for abductive reasoning to nonhuman animals, he uses a concept coined by Peirce. Like induction and deduction, abduction is a mode of reasoning. Whereas the former modes are more typical of human reasoning, the latter is a characteristic of both human and nonhuman animals. Abduction is the instinct of guessing correctly, the intuitive "faculty of divining the ways of Nature" (*Collected P.* § 5.173), but by this method we reason neither "blindly" nor mechanically. Abduction is an uncertain hypothetical mode of reasoning, which enables us to arrive at truths with a probability higher than chance since "although the possible explanations of our facts may be



strictly innumerable, yet our mind will be able, in some finite number of guesses, to guess the sole true explanation of them" (§ 7.219). In c. 1907, Peirce draws the following parallel between abductive reasoning in human and nonhuman animals:

Our faculty of guessing corresponds to a bird's musical and aeronautic powers; that is, it is to us, as those are to them, the loftiest of our merely instinctive powers. I suppose that if one were sure of being able to discriminate between the intimations of this instinct and the self-flatteries of personal desire, one would always trust to the former. For I should not rate high either the wisdom or the courage of a fledgling bird, if, when the proper time had come, the little agnostic should hesitate long to take his leap from the nest on account of doubts about the theory of aerodynamics. (*Collected P.* § 7.48)

Peirce's most detailed objection against the view that instinct operates blindly in animals can be found in his manuscript "On the Essence of Reasoning and its Chief Varieties" of 1911 in which he criticizes the dichotomy of reason and instinct as false. It begins with another autobiographical reminiscence:

Some seventy years ago, my beloved and accomplished school-ma'am taught me that human kind, being formed in the image of our Maker, were endowed with the power of Reasoning, while "the animals," lacking that power, (which might have made them dissatisfied,) received, each kind, certain "instincts" to do what was generally necessary for their lives. At least, so I understood her. But when I subsequently came to observe the behaviors of several big dogs and little birds and two parrots, I gradually came to think quite otherwise. For, in the first place, I gradually amassed a body of experiences which convinced me that many animals, perhaps all the higher ones, do reason, if by Reasoning be meant any mental operation which from the putting together of two believed facts leads to a Belief different in substance from either of those two. (*CSP Papers*, ms 672, II.1-2)

The mode of reasoning in domestic animals that Peirce describes in this manuscript is not only the one of abduction (for which there is an example in a passage omitted above) but also the one of deduction, that is, the derivation of a conclusion (a new belief) from two premises ("believed facts").

### The Continuity Between Human and Nonhuman Minds

For Peirce, the continuity between human and nonhuman beings is not a matter of the continuity between beings with and without minds, but one between organisms of less and more complex mental powers. Animals have minds, "however strange they be,— such as the medusae, and even down to

the very [microscopic organism of the] moner, ... each has something like a mind with the two fundamental mental powers" of Feeling and Effort (*CSP Papers*, ms 659, G'2-G'3).

The argument that there is more continuity between human and nonhuman animals than discontinuity (M3) pertains to Peirce's theories of synchism, "the doctrine that all that exists is continuous" (*Collected P.* § 1.72), and the anti-individualism (Oleksy) associated with it. Peirce denounced the philosophy of dualism as a method "which performs its analyses with an axe, leaving as the ultimate elements, unrelated chunks of being" (§ 7.570). Synchism is equally incompatible with individualism. Since "every point directly partakes the being of every other, ... individualism and falsity are one and the same" (§ 5.402, fn.). The very notion of an individual, based on the idea of a "separate existence ... apart from one's fellows" deserves to be denounced as a manifestation of "ignorance and error" (§ 5.317). Peirce rejected it both as an explanatory principle of economic growth and as determinant of biological evolution. As to the former, he criticized the nineteenth century conviction "that progress takes place by virtue of every individual's striving for himself with all his might and trampling his neighbor under foot whenever he gets a chance to do so" as "the Gospel of Greed" (§ 6.294). As to the latter, he rejected Darwin's principle of the "struggle of life" and criticized it sharply: "Among animals, the mere mechanical individualism is vastly reinforced as a power making for good by the animal's ruthless greed. As Darwin puts it on his title-page, it is the struggle for existence; and he should have added for his motto: Every individual for himself, and the Devil take the hindmost!" (§ 6.293).

Both dualism and individualism are incompatible with the supreme principle of evolution that Peirce defined as *agapasm* (evolutionary love), the final cause of evolutionary growth, creativity, and diversity, a universal tendency, according to which "advance takes place by virtue of a positive sympathy among the created springing from continuity of mind" (§ 6.304).

Minds, for Peirce, are open systems, whose main characteristic is not monadic isolation and individuality, but continuity in time and space. There is not only continuity between the minds of animals and humans but also between the ones of different human beings, insofar as they share feelings, experiences, and beliefs, argues Peirce. When two individuals have the same thoughts and feelings, they are no longer mutually isolated individuals, but minds between which there is continuity (Lane 6). This is why "the vulgarest delusion of vanity" is to say, "I am altogether myself, and not at all you" (*Collected P.* § 7.571). Those who claim to have had experiences *all of their own*

commit the error of believing that the signs they interpret are all theirs. After all, we are neither the creators of the signs we interpret nor the constructors of the reality that our signs represent. Peirce concludes,

[w]hen we come to study the great principle of continuity ..., it will appear that individualism and falsity are one and the same.... One man's experience is nothing, if it stands alone. If he sees what others cannot, we call it hallucination. It is not "my" experience, but "our" experience that has to be thought of; and this "us" has indefinite possibilities. (*Collected P.* § 5.402, fn. 2)

The continuity between nonhuman and human animals is Peirce's topic in a manuscript of 1903, titled "The communicability of feelings," (§ 1.314-16) in which the author reflects on the possibility of knowledge about the "emotions of affections" of his domestic animals with the following common-sense arguments:

You would never persuade me that my horse and I do not sympathize, or that the canary bird that takes such delight in joking with me does not feel with me and I with him; and this instinctive confidence of mine that it is so, is to my mind evidence that it really is so. My metaphysical friend who asks whether we can ever enter into one another's feelings ... might just as well ask me whether I am sure that red looked to me yesterday as it does today and that memory is not playing me false. (*Collected P.* § 1.314)

Likewise, it is reasonable to assume that animal perceptions are not fundamentally different from human ones. Why should the color perception of a bull irritated by a red rag be fundamentally different from the color perception of a human observer?

I am confident that a bull and I feel much alike at the sight of a red rag.... I know experimentally that sensations do vary slightly even from hour to hour; but in the main, the evidence is ample that they are common to all beings whose senses are sufficiently developed.... I hear you say: "This smacks too much of an anthropomorphic conception." I reply that every scientific explanation of a natural phenomenon is a hypothesis that there is something in nature to which the human reason is analogous. (*Collected P.* § 1.314-16)

In sum, although feeling is accessible only to the one who experiences it, we can and must infer by analogy that others, animals and humans, do have feelings just as we have. We must recognize that our assumptions about the modes of experience and thoughts of others require the same kind of inference.

## Humans as Animals

Forerunners of Massumi's plea for considering humans as animals and for adopting a logic of mutual inclusion (M4) can be found in various of Peirce's comparative analyses of human reasoning and animal instincts. The first is implied in the above-quoted argument of 1866 that consciousness of feeling is more vital in animals than in humans, which follows from the premise that in a human being, this mode of consciousness is "more lively the better animal a man is" (*Collected P.* § 7.585). Human reasoning is superior to the reasoning of which animals are capable, but human instincts are less well developed since they "are not so detailed and featured as those of the dumb animals" (§ 1.638). Reason is superior to instinct insofar as it can be checked and controlled by reason itself, but "Reason is inferior to Instinct" insofar as "it is less subtle, less ready, less unerring.... There is no such thing as bad instinct, unless it be bad in the eyes of something else" (*CSP Papers*, ms 832, 1).

The second respect in which Peirce anticipates Massumi's proposition M4 is his argument of 1902 that "animal and vegetable instinct ... throw much light on man's nature" (§ 1.266), which implies a plea for considering humans from the perspective of their nonhuman evolutionary heritage. The logic of inclusion behind this argument is the one of abductive reasoning. It reveals that "all human knowledge, up to the highest flights of science, is but the development of our inborn animal instincts" (§ 2.754).

The third appears in a number of passages in which Peirce refers to a human being in expressions such as "human animal" (§ 4.644) or "some person or other animal; in every case, therefore, ... an animal" (*CSP Papers*, ms 659, G"10). The definition of human beings (persons) as animals and the inclusion of nonhuman beings in the same class is perhaps most explicit in a manuscript of 1910:

By a "person," by the way, I suppose we mean an animal that has command of some syntactical language, since we neither call any of the lower animals persons, (for though they be able to convey their meanings by various sounds, they do not combine different sounds so as to build sentences,) nor do we so call an infant that cannot yet put two words together to make a sentence. One might almost define a person as an animal possessed of moral self-control; but that would not be correct unless we were prepared to call some dogs, horses, parrots, hens, and other creatures persons, which I take it nobody does, in spite of the moral respect to which they are often well-entitled. One feels that there is an injustice in our non-expression of respect for them. Yet after all, the word *person*, PERSONA, has explicit reference to speech. (*CSP Papers*, ms 659: 10-11)

### The Common Root of Humans and Nonhumans in the Quasi-Mind of Cosmic Design

For Peirce, human and nonhuman nature have a common root in what he defines as mind, thought, or semiosis. What he means is not the mental process in, or the actual thought of, an individual, but thought in a sense in which it “is more without us than within” and in which “it is we that are in thought, rather than thought in any of us” (*Collected P.* § 8.256). Mind, in this sense, manifests itself as the “active power to establish connections between different objects, ... [the] power of ... a living consciousness, such [as] the life, the power of growth, of a plant” (§ 6.455). Its prototype is the process of semiosis, “semeiosis, or action of a sign” (§ 5.473). Semiosis, in this perspective, is a process in which signs grow (Nöth). Thought thus defined “appears in the work of bees, of crystals, and throughout the purely physical world,” for “not only is thought in the organic world, but it develops there” (§ 4.551).

Semiosis as a creative agent in nature manifests itself not only inside and outside the minds of humans, but even outside the minds of nonhuman animals, in plants and in certain respects also in nonorganic nature. Faithful to the doctrine of continuity, Peirce rejects the conception of a semiotic universe in opposition to a nonsemiotic one. There are not only signs in human minds and culture; signs are omnipresent in all nature. Quite in the spirit of synechism, Peirce also reflects on the possibility of sign processes outside animal minds, but when he considers rudiments of semiosis outside minds proper, he introduces concepts such as “quasi-minds” and “quasi-signs” § 4.550). A sunflower is his example of a vegetative agent interpreting a quasi-sign (here called “representamen”) in a process of quasi-semiosis:

If a sunflower, in turning towards the sun, becomes by that very act fully capable, without further condition, of reproducing a sunflower which turns in precisely corresponding ways toward the sun, and of doing so with the same reproductive power, the sunflower would become a Representamen of the sun. (§ 2.274)

In his most radical tentative definition of the nature of semiosis, in which Peirce suggested, “that the entire universe ... is perfused with signs, if it is not composed exclusively of signs” (§ 5.448, fn. 2), semiosis becomes a metaphysical issue. The implication of pansemiotism that it seems to have brings Peirce’s ideas close to panpsychism, “very roughly the thesis that everything is (or at least some things are) fundamentally physical *and* fundamentally mental” (Chalmers, 21), which is currently being revived in the

contexts of object-oriented philosophy (Shaviro) as well as in the philosophy of mind and of its extension in the mind's extension into its environment (Chalmers).

Was Peirce an advocate of panpsychism or at least pansemiotism? The question needs to be explored elsewhere in more detail, but two answers may be anticipated here. First, Peirce would certainly have objected to the term "panpsychism" because his semiotics is not a psychical or psychological theory; it is the theory of a logic in a new guise. For him, the universe is not permeated with psychical phenomena, but with signs.

Second, Peirce's semiotics deals with the life of signs, not with dead matter or with mechanical processes that obey necessary laws. The life of signs presupposes semiotic mediation and growth. Neither immutable necessity nor precise predictability of things to come belong to the semiotic universe. The universe of physical processes has also a potential for growth and creative evolution. This is what Peirce means with his Schelling-inspired dictum that "what we call matter is not completely dead, but is merely mind hide-bound with habits. It still retains the element of diversification; and in that diversification there is life" (§ 6.158).

#### Conclusion: A Glance at the Other End of the Continuum

Peirce does not fail to address the semiotic capacities that make humans unique among all other animals, but he argues that there is hardly any human capacity for which there are no precursors in nonhuman animals. The ultimate goal, the *summum bonum*, namely, "to further the development of concrete reasonableness" (§ 5.3), "to make one's life more reasonable" (§ 1.602), is a task that can only be promoted by human endeavor, reasoning in the sense of "thought subjected to logical self-control," which, in turn, must have "effective ethical self-control" as its regulating agent (§ 5.533). Paraphrasing Peirce's ideas on how humans thus distinguish themselves from animals as "rational beings," Potter writes, "It is this capacity for critical review and control of actions and of habits of action which for Peirce defines reason.... Man is a rational animal whether he likes it or not; ... he is compelled to make his life more reasonable and in this lies his true dignity and liberty" (125).

Self-control is a matter of degree. The lowest degree can be found in nature, whereas the highest, including self-control through creative imagination and ethical principles, are distinctly human. The continuum begins with

inhibitions and coordinations that entirely escape consciousness. There are, in the next place, modes of self-control which seem quite instinctive. Next, there is a kind of self-control which results from training. Next, a man can be his own training-master and thus control his self-control. When this point is reached much or all the training may be conducted in imagination. When a man trains himself, thus controlling control, he must have some moral rule in view, however special and irrational it may be. But next he may undertake to improve this rule; that is, to exercise a control over his control of control. To do this he must have in view something higher than an irrational rule. He must have some sort of moral principle. This, in turn, may be controlled by reference to an esthetic ideal of what is fine. There are certainly more grades than I have enumerated. Perhaps their number is indefinite. The brutes are certainly capable of more than one grade of control; but it seems to me that our superiority to them is more due to our greater number of grades of self-control than it is to our versatility. (*Collected P.* § 5.533)

What humans and animals have in common is that “the ultimate purpose of thought, which must be the purpose of everything, is beyond their comprehension,” observes Peirce (§ 5.403, fn. 3). However, humans can and do reach out actively in the search for this purpose through self-controlled thought, in a way which Peirce paraphrases as follows: “It is by the indefinite replication of self-control upon self-control that the *vir* [the distinctly human] is begotten” (§ 5.403, fn. 3). Furthermore, in their capacity of self-knowledge, the knowledge of their own identity, humans “far transcend the mere animal” (§ 7.591). Despite the incapability of knowing our “own essential significance” that we share with all animals, we have “this outreaching identity ... [that] is the true and exact expression of the fact of sympathy, fellow feeling—together with all unselfish interests—and all that makes us feel that he has an absolute worth” (§ 7.591).

The context of Peirce’s remark, that the ultimate significance of life is beyond human understanding, deserves closer attention, not least because it contains a quote from a half-line of the 14th stanza of Emerson’s poem of 1841, *The Sphinx*. The full context of Peirce’s argument is expressed in the sentence, “He cannot know his own essential significance; of his eye it is eyebeam” (§ 7.591). In the quoted poem, it is the Sphinx who utters the words “Of thine eye I am eyebeam,” spoken to the traveler and poet-philosopher who dared to address her. To what extent can these words elucidate Peirce’s argument?

The traveler’s eye stands metonymically for his mind, and the eyebeam refers to his seeing. The traveler-poet believes to see the object in front of him, the Sphinx, but the Sphinx refutes this belief when she pronounces that she is this eyebeam herself. By this, she declares that she stands between



the traveler's eye and the object of his presumed vision, which means that the traveler cannot really see her. This is why Emerson's poetic scenario can elucidate Peirce's argument. Just as the traveler-poet cannot actually see what he believes to see, humankind cannot know what its ultimate destiny is.

Although the essential significance, the ultimate meaning, of life is beyond human understanding, Peirce attributes to humans the capacity of knowing the ethical grounds of their identity. It is "the fact of sympathy, fellow feeling—together with all unselfish interests" which make us feel that life has "an absolute worth" (§ 7.591). In this respect, human beings are "conscious of their interpretant" (§ 7.591), that is, they are aware of the meaning of their existence. The interpretant (or meaning) of the life of a human being consists in finding again his or her "thought in other minds" (§ 7.591). Peirce's conclusion on these premises concerning the nature of humans is "that nothing but an undue ascendancy of the animal life can prevent the reception of this truth" (§ 7.591).

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